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A Cultural Resources Survey of the Keith
Mosbey Borrow Site Permit Request, Castor
River-19, Greene County, Arkansas

U.S. Army Corps of Engineers
Memphis District

Jimmy McNeil
Staff Archeologist

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ABSTRACT

On 20 June 1990, an intensive cultural resources survey was conducted by the Environmental Analysis Branch of the U. S. Army Corps of Engineers, Memphis District over an approximately 62 acre permit area. The area was in hay stubble. The permit request area is located in Township 18N, Range 3E, E1/2, SE1/4 Section 12 on the Delaplaine quadrangle map, Green County, Arkansas. A pedestrian survey of the project area revealed two prehistoric sites, 3GE363 and 3GE364. The sites will be avoided.

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General Area
Project Area
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Public Notice

INTRODUCTION

An intensive cultural resources survey was conducted by Memphis District Archaeologist, Jimmy McNeil, on 20 June 1990, within the requested permit area adjacent to the Cache River, Green County, Arkansas.

PROJECT DESCRIPTION

The proposed project is located in Township 18N, Range 3E, E1/2, SE1/4 of Section 12 on the Delaplaine, Green County, Arkansas (map 1). Part of the project area is a ridge; the other portion of the project area is a flat swampy area. Approximately 15 cm. of soil will be removed from the ridge area and placed into the flood zone. The ridge will then be replanted in hay and rice will be raised in the flood zone.

ENVIRONMENTAL SETTING

Green County is in the northeastern part of Arkansas. Its approximate land mass is 580 square miles. Approximately 50 percent of the area consists of level soils that formed in alluvium deposited by large rivers. The rest of the area is mainly loess. Sandy and gravelly sediments underlie the loess.

Hot, humid summers, mild winters, and generally abundant rainfall is characteristic for the county. It is on the borderline between subtropical and continental weather forces.

Precipitation averages about 47 inches per year. Though, as much as 60 percent of the annual precipitation falls during the winter and spring.

Three main physiographic areas predominate the county. Crowley Ridge crosses the central part of the county in a northeast-southwest direction. Both sides of the ridge merges with loessal plains which, in turn, are bordered by bottom lands. The boundary between the western loessal plain and the bottom lands of the Cache River is gradual and indistinct (Robertson, 1969).

The geomorphology of the permit area is slightly unusual in that it has approximately 4-8 meters difference between the ridge top and bottom area. The ridge has approximately 1 meter of loessal soil covering gravel deposits.

PREVIOUS INVESTIGATIONS

The Eastern and Western Lowlands of Arkansas have a long history of archaeological studies. Squier and Davis (1848) recorded sites in the St. Francis River Basin. W. B. Potter (1880) documented sites in northeast Arkansas. Cyrus Thomas (1891, 1894) excavated sites in northeast Arkansas.

C. B. Moore (1910) worked at the interface of the Ozark Plateau and the Western Lowlands. Phillips, Ford, and Griffin (1951) conducted survey work in the northeast portion of the state.

More recent studies have been carried out by Dan Morse (1969, 1973a, 1975a) in the L'Anguille, St. Francis, and Cache River drainages. Schiffer and House (1975) conducted a major project along the Cache River. Klinger et al (1976) excavated at Village Creek. Iroquois Research Institute (1978) conducted an extensive study of the St. Francis River Basin. The most recent study of any size was conducted by Anderson (1989) along the L'Anguille River Basin.

ARCHAEOLOGICAL CONTEXT:

The number of recent archaeological reports have summarized the prehistory of the Western Lowlands of northeast Arkansas (Davis 1967; House 1975a; Morse 1969, 1975b, 1982, n.d.; Klinger 1976; Bennett et al 1982). The following is a brief summary of our knowledge about the prehistory of the Western Lowlands.

The chronological model for prehistoric studies is subdivided into four major periods and is very similar to that in use elsewhere in eastern North America (Griffin 1967). These are discussed briefly below using the customary subdivisions early, middle and late.

Paleo-Indian : Pre-10,000 - 8,000 B. C.

This period is considered the earliest for human habitation in the Mississippi Valley. During this stage humans pursued a gathering and hunting lifeway well adapted to the environment present at the end of the Pleistocene (House 1975a: 30). The Mississippi and Ohio Rivers were combined and flowed in a single braided stream just to the east of Crowley's Ridge. In addition, generally moister climatic conditions in the Western Lowlands may have caused streams to be larger, and the combined Cache, St. Francis, and/or Black rivers may have flowed along the present course of the Cache River (Smith and Saucier 1971).

The human population during this stage was probably organized on a band level (Lee and DeVore 1969: Service 1966), with a gathering and hunting level of subsistence. Subsistence focused on gathering wild plant and animal resources (such as fish and shellfish) and hunting small mammals, deer and Pleistocene megafauna.

Dalton : 8,000 - 7,000 B. C.

Dalton materials, primarily the characteristic Dalton point forms, have been recovered from a number of sites in the larger region surrounding northeast Arkansas (Logan 1952 - Graham cave, Missouri; DeJarnette 1962 - Stanfield-Worley, Alabama; Shippie 1966 - Research Cave, Missouri; McMillan 1971, 1976 - Rodgers Shelter, Missouri).

Archaic 7,000 - 500 B. C.

The Archaic stage is perceived as a series of successive adaptations of a gathering and hunting lifeway to a gradually changing post-Pleistocene environment. Chronologically the Archaic stage is subdivided into early, middle and late. Early Archaic is seen as a time of transition from the Paleo-Indian lifeway to that of later Archaic substages. In the same way, the Late Archaic substage included characteristics precursory to settlement and subsistence patterns of the succeeding Woodland stage. As was the case with the Paleo-Indian, the emphasis for subsistence during the early Archaic was still on gathering (including fish) with hunting furnishing additional protein. The band would continue to be the most viable level of social organization (Klinger et al 1976; 50).

The Hypsithermal (6,000 - 3,000 B. C.) coincides roughly with the early-middle Archaic (Davis 1981). This was a time of drier climate which brought about a general shift from forest to grasslands (King and Allen 1977). These climatic changes were accompanied by a change in major drainages from a braided stream pattern to a meander stream pattern of flow (Saucier 1974).

Early Archaic. The early Archaic was a period of relatively intensive occupation of the Western Lowlands, with a settlement pattern oriented within individual drainage systems of base camps surrounded by a series of hunting and butchering camps and gathering stations (Morse 1971b; Goodyear 1974). Efficient gathering and hunting activities may have encouraged seasonal shifts in settlement (Klinger et al 1976: 50).

Middle Archaic. Little is known of the culture history for this substage, which may last up to 4,000 years (House 1975b: 30). Artifacts are rare or, perhaps, cannot easily be designated as from this substage. Davis (1981) suggests that the hypothesis of a population hiatus over the region linked to environmental changes and shifts in river drainage systems should be tested. Possible explanations for this demographic shift include a general depopulation or perhaps only a sparse population of the area or, possibility, an inability by the archaeologists to segregate and recognize the middle Archaic complexes. One contributing factor may be the re-occupation of early Archaic sites by middle Archaic bands of people (Klinger et al 1976: 51).

Late Archaic. The late Archaic substage is a period of widespread intensive occupation of the Western Lowlands. Moister climatic conditions may have been prevalent (Whitehead 1965; Sears 1935) with ecological changes of sufficient

magnitude to attract increasing numbers of people into the region. Greater efficiency is also evident in the gathering and hunting process (House 1975a: 30; Morse n.d.). Archaeological evidence indicates that there was trade for exotic raw materials. Ground and polished stone artifacts are also part of the tool assemblages.

Woodland 500 B. C. - A. D. 1,000

Chronologically the Woodland stage, like the Archaic, is subdivided into early, middle, and late.

The Woodland stage is customarily associated with the first widespread manufacture of ceramics, mound construction, and a postulated first widespread cultivation of at least maize and squash and possibly other native or imported cultigens in the eastern United States (Griffin 1967; Streuver and Vickery 1973). Woodland societies were adapted to a number of environments of which some were well suited for horticulture and some only slightly so (Cleland 1976: 73). Therefore, a variety of subsistence strategies would probably be present in any one region such that a seasonally oriented settlement pattern would probably persist within some societies throughout much of the Woodland stage.

Early Woodland. There are ceramics considered of early Woodland manufacture known in the Mississippi Valley, but only a few examples of early Woodland occupation are recognized in Arkansas. No characteristic early Woodland ceramics are yet reported in the Western Lowlands (House 1975a: 32).

Middle Woodland. By the middle Woodland substage settlement and subsistence patterns appear to be changing as the band level of social organization is replaced by the more complex tribe (Sahlins 1968). Settlements tend increasingly to be semi-permanent or permanent habitation sites (Klinger et al 1976: 52).

Plant foods are slowly increasing in importance in the subsistence strategy, particularly those plants bearing edible seeds (Cleland 1976: 71).

Most middle Woodland societies in the Mississippi Valley were probably involved to some extent in the Hopewellian Interaction Sphere (Streuver 1964). The Hopewellian Interaction Sphere is characterized by the diffusion of ceremonialism on an inter-regional level and by the exchange via a trade network of exotic raw materials (House 1975a: 32). The middle Woodland subsistence system was dependent upon trade networks based upon local group accumulation of wild food surpluses systematically redistributed on a regional or inter-regional level.

While there is no mention in the available literature of middle Woodland Sites in the Western Lowlands of Arkansas, there are recorded middle Woodland sites bordering this area (House 1975a, 1975b; Davis 1981). It is likely that middle Woodland occupations are located within the area but are presently

unrecognized at several recorded sites in the lower Cache Basin (House 1975b: 151). The Marksville period (Helena phase) is assigned to the middle Woodland occupation of the Western Lowlands.

Late Woodland. The inter-regional level of trade networks maintained by middle Woodland societies appears to be generally lacking during the late Woodland. However, during the very late Woodland there is an increase in the number of ceremonial centers accompanied by a highly developed ceremonialism. Earthen mound building remained a trait, with mounds constructed both for burial and other ceremonial purposes. While the population increased in the area it is demographically more dispersed.

The late Woodland occupation of the lowland areas of northeast Arkansas is represented by two well-documented ceramic traditions which serve as markers for these occupations. One marker is the grog-tempered Baytown series and the other is the sand-tempered Barnes series (House 1975a, 1975b). The Baytown series predominates in the southern portion and eastern edge of the region. The sand-tempered Barnes series is more concentrated in the north (Davis 1981).

Mississippian : A. D. 1,000 - 1,700

The Mississippian stage is also divided into early, middle and late substages. Phases applicable to this region have been proposed for each substage and these are summarized in Davis (1981). In the eastern United States the Mississippian stage is based on a social structure dependent upon intensive agriculture. Cultigens include maize, squash, beans, and possible other imported or native cultigens.

The Mississippian stage is a time of rapid cultural change culminating in a number of characteristic traits. Over much of northeast Arkansas shell-tempered ceramics serve as a convenient marker for the beginnings of this state (Phillips, Ford and Griffin 1951: 445). In addition to distinctive ceramics, other traits include the presence of specialized craftspeople, the construction of earthen temple mounds, an increasing dependence upon agriculture and ever greater socio-political control of the population including fulltime leaders (Morse 1969). The settlement system appears to be one of permanent habitations ranging in size from extensive villages to small, family farmsteads (House 1975a: 32; Klinger 1975; Morse 1969; Price et al 1975).

Although agriculture played a primary role in food procurement, overall subsistence strategies would undoubtedly continue to include gathering, fishing and hunting as important subsystems to supplement the diet with proteins and other nutrients. In addition, the maintenance of these subsystems could serve as a buffer during times of poor harvests. As a result of this mixed subsistence pattern, a number of site types would be expected archaeologically, e. g. hunting camps, butchering camps, gathering stations, similar to those in the earlier Archaic and Woodland stages (Klinger et al 1976: 54).

Early Mississippian. It is uncertain what formed the catalyst for the development of Mississippian stage culture. The colonization by Mississippian people from the north as well as the acculturation of preadapted Woodland societies in the area would certainly have been factors (Cleland 1976: 71; House 1975a: 32; Morse 1969; Scholtz 1968). Late Woodland sites are recorded along the Cache River in Craighead County and elsewhere in the Western Lowlands with characteristic Baytown "flowerpot" vessel forms which have a shell-tempered paste (Morse 1969: 22; House 1975a: 32).

Middle Mississippian. Both the Eastern and Western Lowlands are occupied during this substage with widespread settlement by about 1200 A. D. Markers for this substage include Scallorn arrow points and predominately undecorated shell-tempered ceramics (House 1975a: 32). The settlement pattern in the Eastern and Western Lowlands of northeast Arkansas differs somewhat with numerous villages oriented around plazas and temple mounds in the Eastern Lowlands (Morse 1969) contrasted with village sites with outlying hamlets, farmsteads and extraction sites in the Western Lowlands (House 1975a: 33).

Late Mississippian. During this substage, which begins about A. D. 1400, there is a shift in settlement pattern along with political centralization of power. Large multiple mound sites with deep middens are uncommon in the Western Lowlands, although according to House (1975a: 33) smaller late Mississippian sites are recorded in the upper reaches of the Cache River Basin. These small sites may be related to the Parkin phase sites located in the eastern St. Francis River Basin. Light occupation along the lower Cache river is the apparent norm throughout the Mississippian stage (House 1975a: 33). This may be the case to the east in the L'Anguille River Basin as well. Morse suggests that these small sites may be hunting camps.

Historic Period : 1541 to the Present. Arkansas history can now be organized in a framework of three primary activity periods as presented in Davis (1981). These are the contact Period: 1500 - 1840; the European Period: 1500 - 1825; and the Anglo-American Period: 1780 - present. Each period is further subdivided into a number of subordinate activity periods. Northeast Arkansas has been affected by all three primary activity periods and by many of the subordinate periods.

Contact: 1500 - 1840. When the DeSoto expedition entered northeast Arkansas in 1541 the Mississippian Stage Indian occupation was at the height of its complexity with large fortified towns and chiefdom level societies.

Within a century of the DeSoto expedition a dramatic shift in the settlement and decrease in population level and occurred in northeast Arkansas. As early as 1673 when the French entered the area they found none of the population centers mentioned by the Spanish. The French found a relatively depopulated area (Jennings 1975) with a number of Quapaw villages at the mouth of the Arkansas and White rivers.

European : 1500 - 1825. The DeSoto expedition in 1541 was only the first of a number of explorations by Europeans. Early French explorers who traveled through or near the St. Francis River Basin included Father Jacques Marquette and Louis Joliet, who visited a Quapaw village near the mouth of the St. Francis River in 1673 (Iroquois Research Institute 1978: 112). Robert De LaSalle, Henri de Tonti and Henri Joutel may also have passed through portions of the St. Francis River Basin but conclusive documentation is not available to verify this (Severin 1968). Non-Indian settlement is not documented in Arkansas prior to the French settlement near the mouth of the Arkansas River at Arkansas Post in 1686. French interests were exploration, the fur trade, and some settlement. They traveled, traded and established a number of settlements along rivers of the Lower Mississippi Alluvial Valley. One such settlement was St. Genevieve, settled in the mid-18th century by French miners to operate lead mines and process ores for shipment to New Orleans.

In 1762, at the end of the French and Indian War, the French ceded the vast tract of land called Louisiana to Spain. During the time of Spanish control there was some influx of settlers, although few Spaniards traveled as far north as Arkansas to live. Hundreds of land grants were given out (Ferguson and Atkinson 1966: 23) and the presence of these grants provides good documentation of settlement of the area after 1792.

The territory was returned to French in 1800 and was finally transferred to the Americans in 1803. During these land transfers American settlers were entering the area and settling in northeast Arkansas.

In the late 18th and early 19th centuries a number of Indian tribes claimed portions of Arkansas. These included the Osage and the Cherokee, the latter began moving west into Arkansas in the late 18th century (House 1975a: 33). These Indians participated in the French and Spanish fur trade (Ferguson and Atkinson 1966: 22, 58). Unrelenting pressures from European and American settlers seeking new lands gradually led to the displacement of Indian groups. The last Indian populations of Arkansas were removed from the state in the 1830's.

Anglo-American : 1780 - present. After acquisition by America in 1803 as part of the Louisiana Purchase, Arkansas became part of Louisiana and then part of the Missouri territories. In 1819 it was granted territorial status and became a state in 1836. Population grew fairly rapidly with 1062 people recorded in the 1810 U. S. Census and 14,000 recorded by 1819 (Ferguson and Atkinson 1966: 26).

The literature indicates that early settlement by English-speaking peoples began along major rivers just before 1800. Settlers were locating as far west as the Cache Basin by 1816, Goodspeed notes a farmstead on Crowley's Ridge by 1820 (Goodspeed 1963: 115).

In the last quarter of the 19th century a number of railroad lines were constructed across the project area. With the establishment of an effective transportation system for products, timber companies began logging activities in the project area (Curry 1960). Railroad towns also became lumber mill towns and boards, staves and other wood products were produced and shipped out on the railroad system. After logging, land companies drained the land and large cleared tracts were available for cultivation. This created a need for farm laborers and from the late 1800's through the early 1900's there was a large influx of black and white tenant farmers into the region (Iroquois Research Institute 1978: 112).

Survey Methodology and Results

Only the upland portion of the project area was surveyed. The lowland area had, in the past, been deep plowed and land leveled. It was believed that this combination would have destroyed any cultural resource that may have been there.

The upland ridge was covered in hay stubble. However, approximately 5% of the surface could be seen. All the clear (bald) areas were surveyed visually. The rest of the surface was surveyed by digging shovel cuts (30 x 30) every 30 meters. Every fifth hole was dug deeper than the others as a soils check to look for deeper buried sites. Below the plow zone there was little or no change in the soil.

The project owner has had core drillings made in the field. The drillings showed that the loessal soil was approximately 1 meter deep.

Artifacts were found in two shovel cuts near the northwest end of the projects. Both artifacts were flakes. Two other artifacts were found on the surface. One was the distal end of a projectile point made from fine grained sandstone. The other was the basal half (Drawing 1) of a sandstone projectile point. Site forms have been sent to the State and this site has been designated 3GE364.

At the northeast end of the project, numerous flakes, cores, and pieces of fire broken rock were found on the surface. This has been designated by the State as 3GE363. Site 3GE364 is approximately 364 meters southwest of site 3GE363.

No artifacts were collected or retained, all were left in the field.

Site 3GE364 seems to have sustained some damage when the adjacent highway was constructed. While 3GE363 was damaged slightly by the construction of a barn. The barn is now gone. However, further damage will not occur because of the permit. The land owner agreed to avoid both sites. They will be left in hay when the remainder of the ridge is deflated by 15 to 20 cm. Thus, there will be no impact on either of the sites.

Recommendations

The permit should be issued with the condition that sites, 3GE363 and 3GE364, and a parameter be avoided. No soil will be taken from the site area.

If the opportunity arises through research grants or student research the site should be surface collected and tested for significance and to determine how it fits into the local and regional history.

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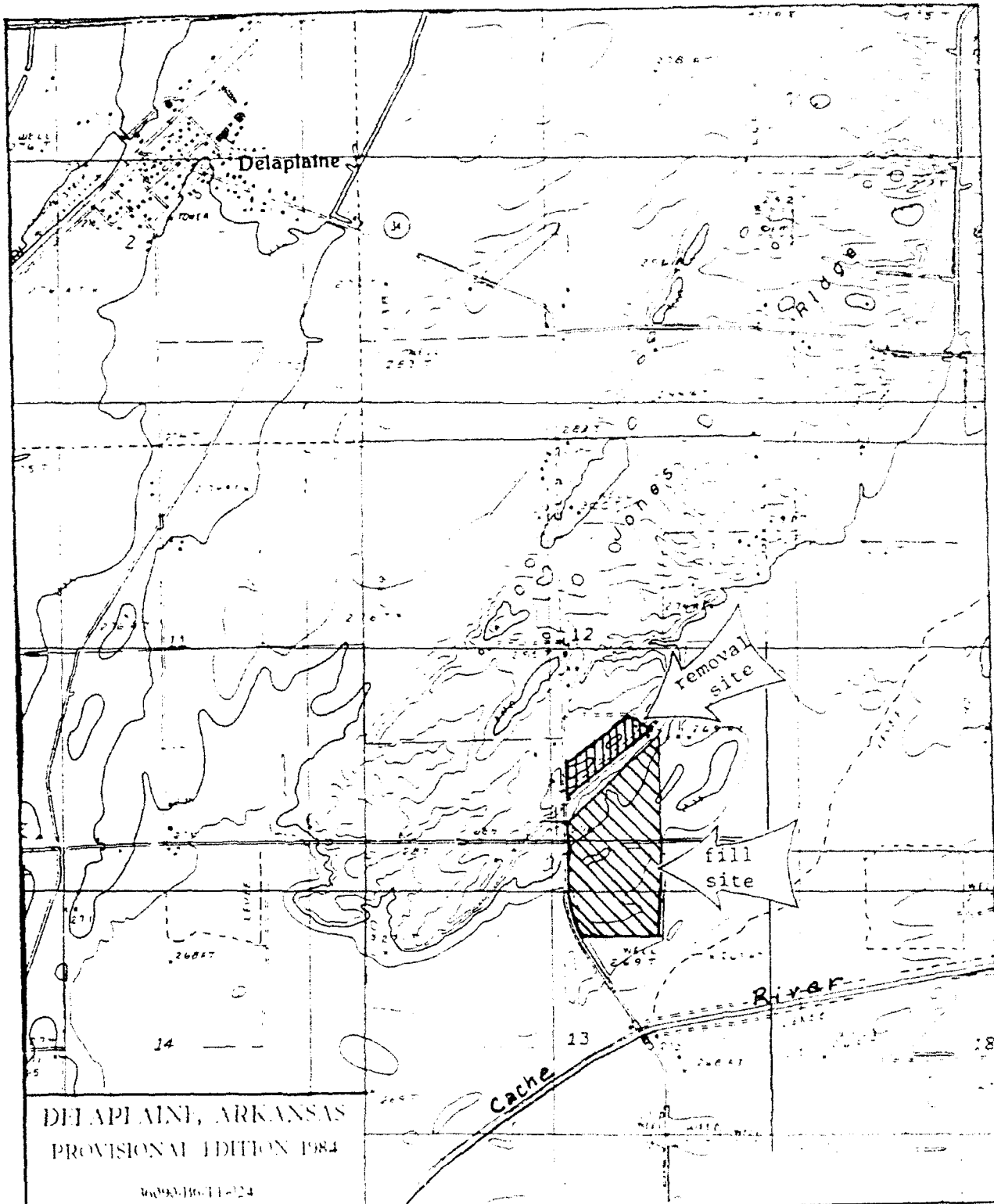
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AAS SITE SURVEY FORM

SKETCH MAP SUPPLEMENT

Optional

State Site No. 3GE363

Map Drawn By

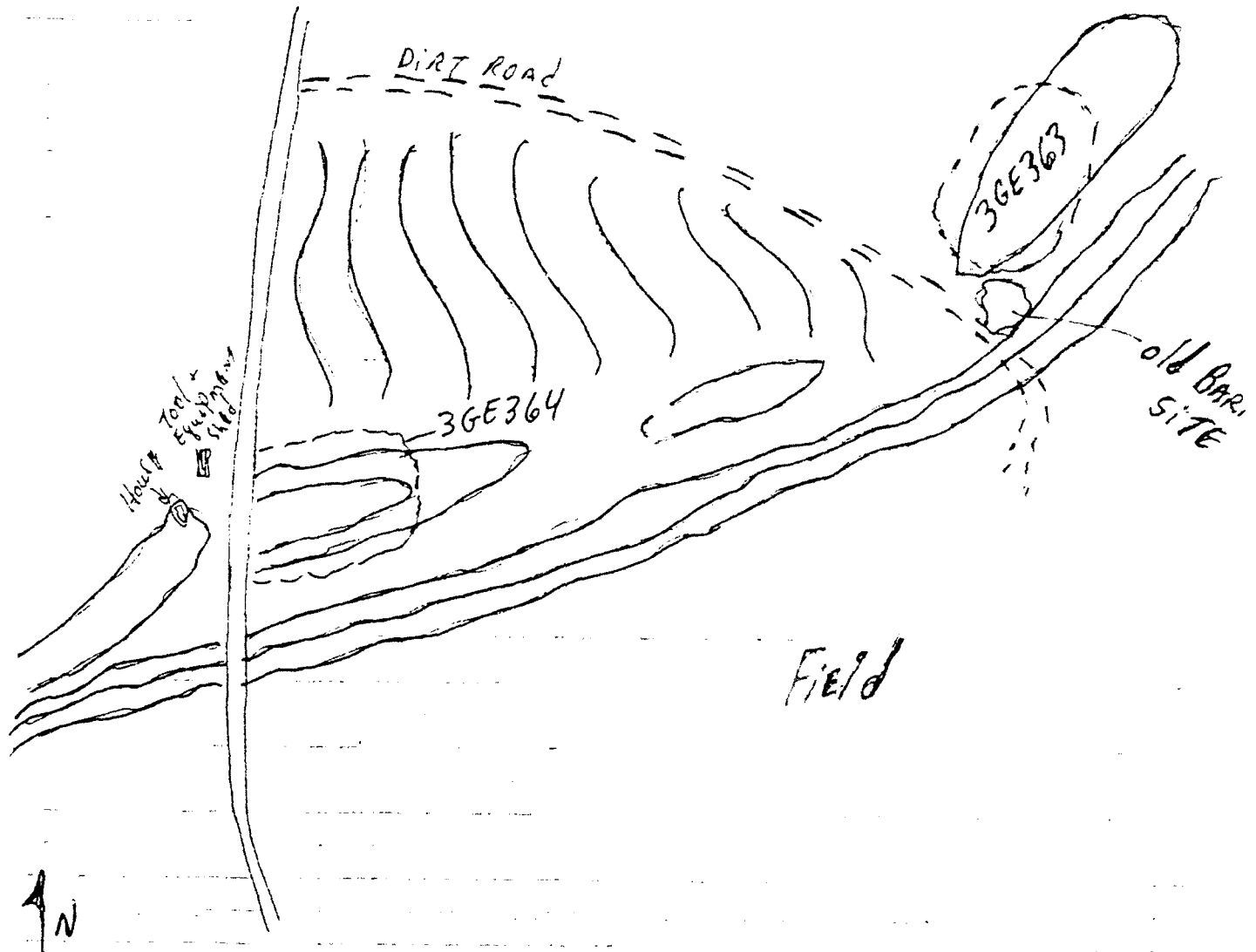
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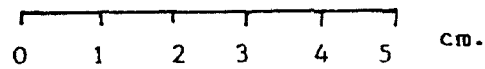
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Remarks

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NOT TO SCALEMap 2
Project Area



Drawing 1
Projectile Point Base

DEPARTMENT OF THE ARMY
Memphis District, Corps of Engineers
B-202 Clifford Davis Federal Building
Memphis, Tennessee 38103-1894

Cache River-19

May 15, 1990

JOINT PUBLIC NOTICE

Corps of Engineers
and
State of Arkansas

TO WHOM IT MAY CONCERN:

Pursuant to 33 CFR 325, as published in the Federal Register dated November 13, 1986, notice is hereby given that Mr. Keith Mosbey, P. O. Box 43, Delaplaine, Arkansas 72425, telephone (501) 249-3407 has made application for a permit under Section 404 of the Clean Water Act to deposit fill material onto agricultural wetlands adjacent to the Cache River. The site is located approximately 2.5 miles southeast of Delaplaine, Greene County, Arkansas (see sheet 1).

The applicant proposes to remove topsoil from an adjacent upland site and place approximately two inches of soil over the 62 acre field. The applicant is attempting to correct a soil problem that occurred when a previous owner precision leveled the field and exposed the alkali subsoil, causing the field to be nonproductive.

The purpose of this public notice is to advise all interested parties of the proposed activity and to solicit comments and information necessary to evaluate the probable impact on the public interest.

By copy of this public notice, the applicant is requesting water quality certification from the Arkansas Department of Pollution Control and Ecology (ADPC&E) in accordance with Section 401(a)(1) of the Clean Water Act. Upon completion of the comment period and a public hearing, if held, a determination relative to water quality certification will be made. Evidence of this water quality certification or waiver of the right to certify must be submitted prior to the issuance of a Corps of Engineers permit. The Corps of Engineers' evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, EPA, under authority of Section 404(b) of the Clean Water Act.

No endangered or threatened species, or their critical habitat, are known to exist in the project area. This application is being coordinated with the U.S. Fish and Wildlife Service. Any comments they may have regarding endangered or threatened wildlife or plants, or their critical habitat, will be considered in our evaluation of the described work.

The National Register of Historic Places has been consulted, and it has been determined that there are no properties currently listed in the register which will be affected by the work. The consultation of the National Register will constitute the full extent of cultural resources investigation by this office unless we are made aware as a result of comments received in response to the notice or by other means of the existence of specific structures or sites which might be affected by the work. Copies of the notice are being sent to the State Archaeologist and the State Historic Preservation Officer.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the project must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the project will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; and other interested parties in order to consider and evaluate impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request, in writing, within the comment period specified in this notice that a public hearing be held to consider this application. Requests for a public hearing shall state, with particularity, the reason for holding a public hearing. The District Engineer will determine if the issues raised are substantial and whether a hearing is needed for making a decision.

If you wish to obtain additional information or to submit comments on the application, please contact Furcy Zeringue at the U. S. Army Corps of Engineers, B-202 Clifford Davis Federal Building, 167 North Main Street, Memphis, Tennessee 38103-1894, telephone (901) 544-3471.

Comments should be forwarded to reach this office by June 5, 1990.

B. G. Williams
for A. G. Davis
Assistant Chief
Construction-Operations Division

Attachments